

Chromodoris Bullockii. Recruit Island, N. Pacific.

— *aureopurpurea*. Haitan Straits, China.

— *tumulifera*. China and Labuan.

— *tenuis*. Fiery-Cross Reef, China Sea.

— *funerea*. Labuan, Borneo.

— *Alderii*. North Formosa.

Albania (n. gen.) *formosa*. Ke-lung Harbour, N. Formosa.

Triopa Principis-Wallia. Haitan Straits, China.

Trevelyana felis. Island of Ponchou, Pescadores, China.

Doridopsis arborescens. Slut Island, coast of China.

Phyllidia spectabilis. Pulo Barundum, W. Borneo.

Freyeria variabilis. West coast of Borneo.

Bornella marmorata. Aden.

On the Anatomy of Ants*. By Sir JOHN LUBBOCK, Bart.,
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(Abstract.)

THE anatomical researches forming this paper are, so to say, an offshoot of the "Observations on the Habits of Ants, Bees, and Wasps," already published at various times in the Society's Journal. It is devoted principally to an exposition of their muscular system, though other parts are discussed, and it is founded on a series of microscopical sections and other preparations. In the introductory remarks the opinions of various entomologists and comparative anatomists are cited with reference to the thorax, and its division into prothorax, mesothorax, and metathorax. The author himself inclines to support Dr. Ratzeburg's views on the subject, who has maintained that the fifth segment of the larva forms not the so-called "scale" or first abdominal segment, but the hinder part of the thorax. The position of the spiracles in ants is commented on as affording strong evidence in support of this opinion.

The internal chitinous appendages appear to divide the thorax

* This memoir in full with suitable illustrations will appear hereafter in the Society's Transactions, the present notice merely glancing at some of the points therein treated.

into four distinct portions, in accordance with which there appear to be four ganglia.

The author then describes minutely the structure of the prothorax from microscopical sections; and a description in detail is given of the muscles of the head and of the legs.

The author calls attention to a structure in ants comparable to that remarkable organ discovered by Von Siebold (1844) in the tibiæ of the front leg of *Gryllus*, and considered by him to serve the purpose of hearing. The recent researches of Dr. V. Graber and others on this subject also receive due notice.

In the tibia of *Lasius flavus* the trachea presents the following arrangement. In the femur it has a diameter of about $\frac{1}{3000}$ of an inch; as soon, however, as it enters the tibia it swells to a diameter of about $\frac{1}{500}$ of an inch, then contracts again to $\frac{1}{800}$, and then again, at the apical extremity of the tibia, once more expands to $\frac{1}{500}$. Moreover as in *Gryllus*, so also in *Formica*, a small branch rises from the upper sac, runs almost straight down to the tibia, and falls again into the main trachea just above the lower sac. The remarkable sacs at the two extremities of the tracheæ in the tibia may also be well seen in other transparent species, such, for instance, as *Myrmica ruginodis* or *Pheidole megacephala*. At the place where the upper tracheal sac contracts, there is, moreover, a conical striated organ, which is situated at the back of the leg. The broad base lies against the external wall of the leg, and the fibres converge inwards. There are indications, though somewhat indistinct, of bright rods.

The posterior portion of the thorax is then described, and the differences which are exhibited in the presence and in the absence of wings pointed out, as also the changes characteristic of the sexes. The postthoracic gland, first observed by Meinert, is then described; and, lastly, the author refers to the muscles which move the abdomen.